

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION FOR LETTERS PATENT FOR:

DEVICE AND METHOD FOR CLIPPING THE CLAW NAILS OF AN
ANIMAL

INVENTORS: ANTHONY R. ROGERS

MICHAEL WATERS

Attorney for Applicant
Eric A. LaMorte
Reg. No. 34,653
LaMorte & Associates, P.C.
P.O. BOX 434
Yardley, PA 19067
(215) 321-6772
mail@uspatlaw.com

DEVICE AND METHOD FOR CLIPPING THE CLAW
NAILS OF AN ANIMAL

BACKGROUND OF THE INVENTION

1. Field Of The Invention

In general, the present invention relates to nail clippers for cutting nails. More particularly, the present invention relates to devices and methods for cutting the claw nails of animals.

2. Description Of The Prior Art

Many different types of animals have claw nails. In nature, claw nails are used for defense, hunting, climbing and the like. Thus, long sharp claw nails are desirable over short dull claw nails. However, with domesticated animals, especially pets, long sharp claw nails present a problem. Pets with long, sharp claw nails can easily scratch their owners. Furthermore, pets, such as dogs and cats, can scratch furniture, wood floors and doors as they move about a home.

It is for these reasons that many pet owners cut the claw nails of their pets. By cutting and dulling the claw nails, the likelihood that the claw nail will scratch a person or an object is greatly reduced.

However, the cutting of a claw nail on many animals is not a simple matter. Unlike humans, many animals have blood vessels and nerve endings within their nails. If the claw nail of such an animal is cut too short, the claw nail will bleed and will cause pain to the animal.

In the prior art, there are many different types of cutting devices that are used to cut the nails and hoofs of different animals. For instance, U.S. Patent No. 4,228,585 to Nelson, entitled Animal Nail Clipper, shows a device that is designed to cut the claw nails of dogs and cats. However, with such prior art clipping devices, the amount of the claw nail that is cut away depends upon the experience of the person cutting the claw nail. If the person using the clipper cuts too much of the claw nail, the claw nail will bleed and will be painful for the animal.

The position of the blood capillaries and nerve endings in a claw nail varies greatly. As a result, in order to be sure they do not hurt an animal, many groomers are very conservative when they trim claw nails. This leaves the claw nail too long, wherein the claw nail can still cause scratching damage.

A need therefore exists in the art for a claw nail clipper that helps a user identify where the blood vessels and nerve endings lie within a claw nail. In this manner, a user can liberally cut down the size of the claw nail without causing pain or injury to the animal.

SUMMARY OF THE INVENTION

The present invention is a clipper assembly for clipping the claw nail of an animal and its associated method of use. The clipper assembly has a set of opposing cutting edges that can clip the claw nail of animals, such as dogs and cats. The cutting edges are part of a clipping mechanism that selectively biases the cutting edges toward each other with enough force to cut an animal's claw nail.

A light source is provided adjacent one of the cutting edges. The light source is oriented to shine light through a claw nail when the claw nail is placed between the opposing cutting edges. The light has a frequency and intensity that enables some of the light to travel through the claw nail. As the light travels through the claw nail, it causes the features within the claw nail to come into contrast. The position of

the blood vessel within the claw nail can therefore be observed. The claw nail can then be liberally clipped without cutting the blood vessel or touching the nerve endings that surround the blood vessel.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the present invention, reference is made to the following description of exemplary embodiments thereof, considered in conjunction with the accompanying drawings, in which:

FIG. 1 is a front view of an exemplary embodiment of the present invention nail clipper assembly. Shown in conjunction with a dog's paw;

FIG. 2 is a cross-sectional view of the embodiment of the present invention nail clipper assembly shown in Fig. 1;

FIG. 3 is a fragmented top view of the front end of the present invention nail clipper assembly;

FIG. 4 is a top view of a dog's paw placed within the front end of the present invention nail clipper assembly; and

FIG. 5 is a side view of an alternate embodiment of the present invention nail clipper assembly.

DETAILED DESCRIPTION OF THE DRAWINGS

Although the present invention can be used to cut any type of elongated animal claw, such as bird talons, or reptile claws, it is particularly well suited for cutting the claw nail of a domesticated mammal, such as a dog. Accordingly, and by way of example, the present invention will be described in conjunction with a dog paw to illustrate the most likely application of the present invention.

Referring to Fig. 1, an exemplary embodiment of the present invention clipper assembly 10 is shown. In this embodiment, the clipper assembly 10 is a manual tool having opposing handle elements 12, 14 that are manually squeezed together to operate the clipper assembly 10. At the front end of the clipper assembly 10 are a set of opposing cutting edges 16, 18. When the handle elements 12, 14 are squeezed together, the

cutting edges 16, 18 are biased against each other, therein cutting any portion of a claw nail 11 that is placed between the cutting edges 16, 18.

As will later be explained, there are many ways to configure a hand tool so that the movement of handles toward each other will cause a corresponding movement of cutting edges. The shown embodiment is only one possible configuration for the present invention. Other known cutting configurations, however, can be adapted for use within the scope of the present invention.

A dog's paw is shown in Fig. 1. The dog's paw has claw nails 11. Within each claw nail are blood vessels and nerve endings that surround the blood vessels. However, the position of the blood vessels and nerve endings within each claw nail 11 cannot be ascertained by viewing the exterior of each claw nail 11.

To determine the location of blood vessels within a claw nail 11, the present invention clipper assembly 10 is equipped with a high-intensity light source 20. The light source 20 is positioned adjacent the lower cutting edge 18 and is oriented to shine light upwardly. Thus, when a claw nail 11 is placed in between the cutting edges 16, 18, the claw nail 11 is

1

positioned directly over the high intensity light source 20. Light from the high intensity light source 20 passes through the claw nail 11 and enables the user of the nail clipper assembly 10 to see the structure within the claw nail 11 including the position of blood vessels. The nail clipper assembly 10 can then be used to cut the claw nail 11 without cutting into the blood vessels or the nerve endings surrounding the blood vessels.

Referring to Fig. 2, the components comprising the present invention nail clipper assembly 10 are better shown. In the selected embodiment, there are two jaw elements 22, 24. Each of the jaw elements 22, 24 supports a cutting edge 16, 18. When the jaw elements 22, 24 are biased toward one another, the cutting edges 16, 18 meet and cut any portion of a claw nail 11 placed in between the cutting edges 16, 18.

A high-intensity light source 20 is disposed in the lower jaw element 24 immediately in front of the lower cutting edge 18. The light source 20 is oriented to shine light upwardly away from the lower jaw element 24. The light source 20 is preferably at least one high-intensity light emitting diode (LED). The LED

preferably emits light at or near the red frequencies of the visible spectrum. Such light frequencies pass best through a biomass. A bright red light will emit light that will pass through most any claw nail, including species and breeds that have black claw nails.

The upper jaw element 22 does not extend over the light source 20. As a consequence, a person using the nail clipper assembly 10 can look down over the top of the upper jaw element 22 and can directly view the light from the light source 20.

The light source 20 is powered by batteries 26 that are held in one of the handle elements 14. An activation switch 28 is disposed between the light source 20 and the batteries 26. The activation switch 28 is activated when the handle elements 12, 14 are initially pressed toward each other. The activation switch 28 is normally open and closes when the handle elements 12, 14 are pressed. Accordingly, the light source 20 is normally off and automatically turns on as soon as a person grabs the nail clipper assembly 10 and applies the smallest pressure to the handle elements 12, 14.

There are a great variety of hand tool configurations having opposing cutting edges that are manipulated by opposing handle elements. The most common configuration being the scissor or plier configuration. Any such prior art tool configuration can be adapted for use as part of the present invention nail clipper assembly 10. However, in the exemplary embodiment shown, a three part hand tool configuration is used. In the shown embodiment, there is a lower body structure 30. The lower body structure 30 has the lower jaw element 24 at one end and the lower handle element 14 at the opposite end. The lower body structure 30 holds the light source 20, the activation switch 28 and the batteries 26.

An upper body structure 32 is attached to the lower body structure 30 at a pivot connection 34. The upper body structure 32 terminates at one end with the upper jaw element 22. The upper body structure 32 is curved so that the upper jaw element 22 lay in a near parallel relationship to the lower jaw element 24.

An upper handle element 12 is provided that connects to the lower body structure 30 at a pivot connection 38. The upper handle element 12 passes over the upper body structure 32. When the upper handle

element 12 is pressed toward the lower handle element 14, the top handle element 12 presses downwardly on the upper body structure 32. This causes the upper jaw element 22 to move toward the lower jaw element 24, thereby causing the upper and lower cutting edges 16, 18 to press against each other and cut.

Referring to Fig. 3 and Fig. 4, it can be seen that when the front end of the nail clipper assembly 10 is viewed from above, the light source 20 can be seen. When a claw nail 11 is placed in the nail clipper assembly 10 and the light source 20 is activated, the light shines through the structure of the nail claw 11. This enables contrasts within the structure of the claw nail 11 to be observed. A person can therefore directly observe where the blood vessels 13 in the claw nail 11 is and where it is not. The claw nail 11 can then be placed in the nail clipper assembly 10 and positioned so that only the portions of the claw nail 11 that do not contain the blood vessels 13 are clipped. When the clipping is done, the nail clipper assembly 10 is set down and the light source 20 is automatically deactivated.

Referring to Fig. 5, an alternate embodiment of the present invention nail clipper assembly 40 is

shown. In this embodiment, a magnifying lens 42 is attached to the upper jaw element 22 above the light source 20. The magnifying lens 42 magnifies any portion of an animals claw nail that is placed into the nail clipper assembly 40 as the light from the light source 20 shines through that section of the claw nail. In this manner, blood vessels in small claw nails, such as cat claws, become much easier to see.

It will be understood that the embodiments of the present invention nail clipper that have been described and illustrated are merely exemplary and that a person skilled in the art can make many variations to the shown designs. For example, there are many configurations that can be used to bias cutting edges of a clipper together. Any such configuration can be adapted for use as part of the present invention. What is important is that a light is provided that shines light through the claw nail so that the position of the blood vessels in the claw nail can be observed prior to clipping. However, this can be done using many different configurations and light sources. All such alternate embodiments and variations are intended to be included in the present

invention clipper assembly as described and claimed
below.